

SIGGRAPH '79

Sixth Annual Conference on
Computer Graphics and
Interactive Techniques

Sponsored by:
ACM/SIGGRAPH

**GUIDE TO FILM AND
VIDEOTAPE RETROSPECTIVE**

A twenty-hour retrospective of
the best computer graphics
films and videotapes of the
past ten years.

August 8-10, 1979

Edited by Pat Cole
MS 118
NASA Langley
Hampton, VA 23665



SIGGRAPH
79

SIGGRAPH '79

FILM AND VIDEOTAPE RETROSPECTIVE

Wednesday, August 8

12:00 - 1:00 pm
1:00 - 2:00 pm
3:00 - 3:30 pm
3:30 - 5:00 pm

Pat Cole
Bill Donelson
Marceli Wein
Larry Cuba

Thursday, August 9

10:00-11:00 am
11:00-12:00 am
12:00 - 1:00 pm
1:00 - 2:00 pm
2:00 - 3:00 pm

3:00 - 4:00 pm
4:00 - 5:00 pm
5:00 - 6:00 pm
6:00 - 7:00 pm
7:00 - 8:00 pm

Ray Elliot
John Dill
Ron Hays
Ed Catmull
Julian Gomez,
Linda Lee
Charles Csurí
Lou Katz
David Clark
Jane Veeder
Dan Sandin

Friday, August 10

10:00-11:00 am
11:00-12:00 am
12:00 - 1:00 pm
1:00 - 2:00 pm

Ken Knowlton
Patsy Scala
Stan Van Der Beek
Nelson Max

PAT COLE

Wednesday
12:00-1:00 pm

Mail Stop 118
NASA Langley Research Center
Hampton, VA 23665

1. CGI FOR REAL-TIME VISUAL SIMULATION

1972 11 minutes; 16 mm movie film; sound
By: Ground System Department, General Electric, Daytona Beach, FL
Equipment: Real-time Computer Image Generation System

Describes the first real-time Computer Image Generation system used for pilot training at Kingsville Naval Air Station, Texas.

2. VISULINK

1977 4 minutes; 16 mm movie film; silent
By: Singer Link Division, Marketing Dept., Advanced Products
Operations, Sunnyvale, CA; Link-Miles, Singer, United Kingdom;
and Binghamton, NY
Equipment: Research laboratory prototype.

Selections of output from various Link systems using point scan and raster scan computer generated visual displays.

3. E&S - NEW DEVELOPMENTS IN DAY/NIGHT CGI

1977 7 minutes; 16 mm movie film; silent
By: Simulation Systems Dept. of Evans and Sutherland at
Salt Lake City, Utah
Equipment: CT-4 Image Generation System, later delivered to
Lufthansa of West Germany

Variety of out-the-window visual simulations for applications involving the operation of vehicles in land, sea, or air environments.

4. SPACE SHUTTLE FLIGHT SIMULATION

1971 6-1/2 minutes; 16 mm movie film; sound
By: Hybrid Computation and Simulation Lab, LBJ Space Center,
Houston, Texas
Equipment: GE electronic scene generator

Documents a rather sophisticated and probably the first space shuttle orbiter landing simulation.

PAT COLE

5. SPACE SHUTTLE FLIGHT SIMULATION

1978 7 minutes; 16 mm movie film; silent
By: Richard Weinberg, Lockheed, Elec., and Jim Smith, NASA,
at the Hybrid Computation and Simulation Lab,
LBJ Space Center, Houston, TX
Equipment: Evans & Sutherland electronic scene generator (CT-3)

Simulation of payload deployment: Teleoperator Retrieval System intended for Skylab reboost and Long Duration Exposure Facility.

6. 1984 (also known as 1985)

1972 18 minutes; 16 mm movie film; sound
By: Visual Simulation Unit of the Electronics Lab, General Electric,
Syracuse, NY
Equipment: Experimental non-real-time scene generator with video disc

Early space shuttle simulation to demonstrate maneuvers including rendezvous, space station build-up using manipulation arm, payload and solar panel deployment, and earth resources experiments.

WILLIAM C. DONELSON

Wednesday
1:00-2:00 pm

MIT, 9-511
77 Massachusetts Ave.
Cambridge, MA 02139

1. MIT SAMPLER

Current and recent
research

3/4-inch videotape

By: Architecture Machine Group,
Massachusetts Institute of Technology

Equipment: The Architecture Machine Group's facilities include four frame buffers, one virtual frame buffer, a computer-controlled digital and analog eight-channel sound system, a G.E. light valve television projection system with an 8' x 11' rear projection screen, an Advent display, digitizing tablets of various sizes and shapes, five computer-controlled videodisc systems, and computer-controlled video switching and mixing equipment.

A. Spatial Management of Information 13 minutes

As presented at SIGGRAPH '78.

B. SDMS I 8 minutes

The original implementation of the Spatial Data Management System, as completed in July '77.

C. Movie Maps 10 minutes

Snippets of work in progress on a "surrogate" city travel and information system implemented using multiple videodisc systems and a computer database.

D. Automated Maintenance and Repair 5 minutes

A system designed to facilitate repair of equipment and the training of sometimes inexperienced and naive maintenance personnel. The system uses the repair and maintenance of a bicycle as its developmental database.

E. Slide-a-thon 13 minutes

A videotape of one of AMG's videodiscs. The disc contains 54,000 slides from MIT's Rotch Slide Library and other sources.

MARCELI WEIN

Wednesday
3:00-3:30 pm

National Research Council
Division of Electrical Engineering
Ottawa, Canada

1. METADATA

1971 9 minutes; 16 mm movie film
By: Peter Foldes for the National Film Board of Canada at the
National Research Council
Equipment: Mini-based animation system developed at NRC
Award: Germany

An allegorical film about life. Images were drawn by means of a mouse, an early precursor of a graphic tablet.

2. NATIONAL RESEARCH COUNCIL OF CANADA SAMPLER

1971-1975 9 minutes; 16 mm movie film
By: Various television graphic artists at NRC

Short television openings and program inserts for BBC series "The Ascent of Man".

3. HUNGER

1974 12 minutes; 16 mm movie film
By: Peter Foldes for the National Film Board of Canada at the
National Research Council
Awards: 9 awards including Cannes

"An animated film satire of self-indulgence in a hungry world." An early application of computer animation to artistic figurative animation.

LARRY CUBA
1708 Linden Avenue
Venice, CA 90291

Wednesday
3:30-5:00 pm

1. LAPIS

1966 10 minutes; 16 mm movie film
By: James Whitney at the filmmaker's L. A. Studio
Equipment: Mechanical analog machine (prototype)

2. TERMINAL SELF

1971 8 minutes; 16 mm movie film
By: John Whitney, Jr. at the filmmaker's L. A. Studio
Equipment: Mechanical analog machine (prototype)

3. YIN HSIEN

1976 9 minutes; 16 mm movie film
By: Michael Whitney at the filmmaker's L. A. Studio
Equipment: Motion-controlled optical printer (prototype)

4. BINARY BIT PATTERNS

1968 3 minutes; 16 mm movie film
By: Michael Whitney and John Whitney, Sr. at Information
International
Equipment: FR80 Microfilm Plotter

5. PERMUTATIONS

1968 7 minutes; 16 mm movie film
By: John Whitney, Sr. at UCLA Health Sciences
Equipment: IBM 2250

6. FIRST FIG

1974 6 minutes; 16 mm movie film
By: Larry Cuba and Gary Imhoff at Cal Arts
Equipment: Univac 1108, SC 4020 Microfilm Plotter

7. THE STAR WARS COMPUTER ANIMATION

1977 10 minutes; 3/4-inch videotape
By: Larry Cuba at University of Illinois Chicago Circle
Equipment: Vector General Series 3

Documentary on the production of computer animation for the film Star Wars.

8. GENESYS

c.1969 25 minutes (short excerpt); 16 mm movie film
By: Ronald Baecker, Eric Martin and Lynn Smith at MIT Lincoln Labs
Equipment: TX-2

Illustrates the use of the Genesys computer animation system.

RAYMOND L. ELLIOT

Thursday
10:00-11:00 am

Group C-6, MS-272
Los Alamos Scientific Laboratory
P. O. Box 1663
Los Alamos, NM 87545

1. COMPUTER COLOR GENERATIONS

1972 23 minutes; 16 mm movie film with sound
By: Los Alamos Scientific Laboratory
Equipment: FR80 Microfilm Recorder

A documentary about a technique developed at Los Alamos by which computers can produce color film output at the same cost as black-and-white output. Using computer movie runs as examples, the advantages of color over black and white are discussed.

2. MATRICES AND THEIR SINGULAR VALUES

1976 6-1/2 minutes; 16 mm movie film with sound
By: Los Alamos Scientific Laboratory
Equipment: FR80 Microfilm Recorder

Using computer graphics, a visual and oral explanation of the importance of matrices in solving problems is given. The actual solution procedure is discussed and visually demonstrated.

3. INFINITY'S CHILD

1978 22 minutes; 16 mm movie film with sound
By: Los Alamos Scientific Laboratory
Equipment: FR80 Microfilm Recorder

After a brief history of the rise of human intelligence, computer intelligence is discussed. Computer-generated graphics illustrate a variety of calculations that have originated from energy and environmental research projects underway at the Los Alamos Scientific Laboratory.

JOHN DILL

Thursday
11:00-12:00 am

Computer Science Department
General Motors Research Laboratories
Warren, MI 48090

1. DAC-I

1964 13 minutes; 16 mm movie film
By: Computer Science Department, General Motors Research Laboratories
Equipment: DAC-I Design Console attached to IBM 7094

Illustrates one of the earliest uses of computer graphics in an industrial computer-aided design environment.

2. REACTIVE DISPLAYS

1967 6 minutes; 16 mm movie film
By: Computer Science Department, General Motors Research Laboratories
Equipment: IBM 2250-III connected to 360/67

Illustrates interactive aspects of computer-aided design. A good view of the state of the art in the mid 1960's.

3. COMPUTER-AIDED DESIGN AT GENERAL MOTORS

1977 20 minutes; 16 mm movie film
By: General Motors Design Staff, General Motors Technical Center
Equipment: DEC GT62, IBM 2250 connected to IBM 370/168.

Illustrates present day use of computer graphics in a major computer-aided design system.

RON HAYS

Thursday
12:00-1:00 pm

1725 Mt. Olympus Dr.
Los Angeles, CA 90046

1. RON HAYS MUSIC-IMAGE PRESENTATION

1974-1979 50 min; 3/4-inch videotape; sound

By: Ron Hays at WGBH, Boston; Hollywood, CA; and New York City

Equipment: CMX computer editor; PAIK-ABE video synthesizer;
Scanimate computer; various video switchers and
special effects generators plus computer-controlled
animation techniques.

Presentation includes overview of Ron Hays' work in visual music and multi-media concert situations. Selections include works as seen on public television, feature-length films (Sergeant Pepper's Lonely Hearts Club Band and Demon Seed) plus television coverage of Star Wars concerts at Montreal Olympic Stadium, 62,000 people in attendance, using lasers and computer imagery. Presentation also includes examples of Emmy award-winning computer graphic title sequences.

JOHN DILL

Thursday
11:00-12:00 am

Computer Science Department
General Motors Research Laboratories
Warren, MI 48090

1. DAC-I

1964 13 minutes; 16 mm movie film
By: Computer Science Department, General Motors Research Laboratories
Equipment: DAC-I Design Console attached to IBM 7094

Illustrates one of the earliest uses of computer graphics in an industrial computer-aided design environment.

2. REACTIVE DISPLAYS

1967 6 minutes; 16 mm movie film
By: Computer Science Department, General Motors Research Laboratories
Equipment: IBM 2250-III connected to 360/67

Illustrates interactive aspects of computer-aided design. A good view of the state of the art in the mid 1960's.

3. COMPUTER-AIDED DESIGN AT GENERAL MOTORS

1977 20 minutes; 16 mm movie film
By: General Motors Design Staff, General Motors Technical Center
Equipment: DEC GT62, IBM 2250 connected to IBM 370/168.

Illustrates present day use of computer graphics in a major computer-aided design system.

209 Harvard Street
Westbury, NY 115901. HAND/FACE

1972 5 minutes; 16 mm movie film
By: Ed Catmull at the University of Utah
Equipment: PDP 10

3-d models of a hand and a face are manipulated and displayed.

2. MEASURE FOR MEASURE

1968 14 minutes; 3/4-inch videotape
By: Animation and Computer Graphics Staff at the New York
Institute of Technology
Equipment: PDP 11's, Evans and Sutherland frame buffers,
Three River Graphic Display Processors.

An animated film that pokes fun at our way of measuring. Two kinds of computer animation and conventional animation were intercut.

3. TALKING FACE

1974 5 minutes; 16 mm movie film
By: Fred Parke for his Ph.D, University of Utah
Equipment: PDP 10

A model of a head that talks is displayed.

4. NYIT SAMPLERS

1976 10 minutes; 35 mm movie film and 3/4-inch videotape
By: The New York Institute of Technology Computer Graphics
Laboratory

A collection of animated pieces made at NYIT including 2-d and 3-d animation, special effects, and commercials.

5. CASE WESTERN SAMPLER

1979 5 minutes; 16 mm movie film
By: Fred Parke at Case Western
Equipment: Evans and Sutherland realtime visible surface display

A sampler of 3-d animation created at Case Western.

6. ANIMATION COURSE FILM

1974-1977 15 minutes; 16 mm movie film
By: Students and faculty of the Computer Science Department,
University of Utah

The animation course was held for four years at the University of Utah. Each year several short animated pieces with sync sound were made. All of these pieces have been assembled into one film.

JULIAN E. GOMEZ
LINDA M. LEE

Thursday
2:00-3:00 pm

MS 125-241
Jet Propulsion Laboratory
Pasadena, CA 91103

1. EXCERPTS FROM JPL MOVIES

1969-1972 5 minutes; 16 mm movie film; silent
By: Section 312 at the Jet Propulsion Laboratory

Short studies of some of the earlier inner planet missions.

2. PROJECT VOYAGER = TO THE GIANT PLANETS

1977 15 minutes; 16 mm movie film; sound
By: Charles E. Kohlhase, Paul A. Penzo, and Sylvia Lundy at
 the Jet Propulsion Laboratory
Equipment: Univac 1108
 Calcomp Microfilm

A documentary of the preparations for the Voyager Project. Film has some live action and a good deal of flight path studies of the Voyager encounters.

3. HALLEY FLYBY / TEMPEL 2 RENDEZVOUS

1978 12 minutes; 16 mm movie film; silent
By: Linda M. Lee, James F. Blinn, and Julian E. Gomez at the
 Jet Propulsion Laboratory
Equipment: Evans and Sutherland Picture System 2
 PDP 11/55, Univac 1108, Calcomp Microfilm

A study of a proposed mission to encounter Halley's Comet and Comet Tempel 2.

4. 2 ON THE TOWN (excerpt)

1978 5 minutes; 3/4-inch videotape; sound
By: R. R. Irvine at KNXT in Los Angeles
Equipment: Sony

A brief documentary about the JPL Computer Graphics Laboratory, including short interviews with Robert Holzman and James Blinn.

5. VOYAGER 1 ENCOUNTERS JUPITER

1979 3 minutes; 16 mm movie film; silent
By: James F. Blinn and Charles E. Kohlhase at the JPL Computer
 Graphics Laboratory
Equipment: Evans and Sutherland Picture System 2 and Frame Buffer
 PDP 11/55

A color simulation of the Voyager 1 Jupiter encounter in March 1979.

ED CATMULL

Thursday
1:00-2:00 pm

209 Harvard Street
Westbury, NY 11590

1. HAND/FACE

1972 5 minutes; 16 mm movie film
By: Ed Catmull at the University of Utah
Equipment: PDP 10

3-d models of a hand and a face are manipulated and displayed.

2. MEASURE FOR MEASURE

1968 14 minutes; 3/4-inch videotape
By: Animation and Computer Graphics Staff at the New York
Institute of Technology
Equipment: PDP 11's, Evans and Sutherland frame buffers,
Three River Graphic Display Processors.

An animated film that pokes fun at our way of measuring. Two kinds of computer animation and conventional animation were intercut.

3. TALKING FACE

1974 5 minutes; 16 mm movie film
By: Fred Parke for his Ph.D, University of Utah
Equipment: PDP 10

A model of a head that talks is displayed.

4. NYIT SAMPLERS

1976 10 minutes; 35 mm movie film and 3/4-inch videotape
By: The New York Institute of Technology Computer Graphics
Laboratory

A collection of animated pieces made at NYIT including 2-d and 3-d animation, special effects, and commercials.

5. CASE WESTERN SAMPLER

1979 5 minutes; 16 mm movie film
By: Fred Parke at Case Western
Equipment: Evans and Sutherland realtime visible surface display

A sampler of 3-d animation created at Case Western.

6. ANIMATION COURSE FILM

1974-1977 15 minutes; 16 mm movie film
By: Students and faculty of the Computer Science Department,
University of Utah

The animation course was held for four years at the University of Utah. Each year several short animated pieces with sync sound were made. All of these pieces have been assembled into one film.

JULIAN E GOMEZ
LINDA M. LEE

6. VOYAGER 2 ENCOUNTERS JUPITER

1979 6 minutes; 16 mm movie film; silent

By: James F. Blinn and Charles E. Kohlhase at the JPL Computer Graphics Laboratory

Equipment: Evans and Sutherland Picture System 2 and Frame Buffer, PDP 11/55

A color simulation of the Voyager 2 Jupiter encounter in July 1979. This film also models various planetary phenomena which were discovered during the Voyager 1 encounter.

7. PIONEER 11 SATURN ENCOUNTER

1979 2 minutes; 16 mm movie film; silent

By: James F. Blinn, Julian E. Gomez, Robert E. Holzman, and William H. Blume at the JPL Computer Graphics Laboratory

Equipment: Evans and Sutherland Picture System 2 and Frame Buffer, PDP 11/55

A color simulation of the Pioneer 11 Saturn encounter in September 1979. Saturn's awe-inspiring beauty (computer-modeled) lends a breathtaking note to this film.

LOU KATZ

Thursday
4:00-5:00 pm

Columbia University
College of Physicians & Surgeons
630 West 168 Street
New York, NY 10032

1. PIXILLATION

1970 4 minutes; 16 mm movie film; sound
By: Ken Knowlton and Lillian Schwartz at Bell Laboratories,
Murray Hill, NJ
Equipment: SC 4020 Microfilm Plotter, optically added color

Abstract art film.

2. ABSTRACTIONS ON A BEDSHEET

1972 7 minutes; 3/4-inch videotape; sound
By: Bill Etra in Miami, Florida and New York City
Equipment: PDP 11, oscillators

An abstract art work with computer-controlled audio and computer-controlled programmed distortion of a video raster.

3. OLYMPIAD

1971 3-1/2 minutes; 16 mm movie film; sound
By: Ken Knowlton and Lillian Schwartz at Bell Laboratories,
Murray Hill, NJ
Equipment: SC 4020 Microfilm Plotter, optically added color;
BEFLIX and EXPLOR software systems.

Abstract art film based on programmed manipulation of running man image.

4. MS MUFFET

1975 3 minutes; 3/4-inch videotape; sound
By: Lou Katz, Bill Etra, and Louise Etra at Columbia University
and Etras' studio
Equipment: PDP 11/45; Tektronix Scan Converter and 4010 terminal;
Rutt-Etra Video Synthesizer; Electronic Associates
of Berkeley Video Lab; Synthi Audio Synthesizer.

A real-time interactive art piece, with computer-controlled graphics, colorization, sound and keying effects. The performer interacted with the images as the piece was recorded.

LOU KATZ

5. LIMITED VISIBILITY LANDINGS

1973 4 minutes; 16 mm movie film
By: Rod Rugelot at the General Electric Co., Syracuse, NY
Equipment: Special purpose processors

Computer simulation of the landing of an airplane at Hancock airport under differing visibility conditions.

6. PATCHWORK '71

Prior to 1971 30 minutes; 16 mm movie film; sound
Collected and Edited By: Professor Kent Wilson, Department
of Chemistry, University of California, San Diego
Equipment: Many systems. Some sound and optical color
added by Dr. Wilson.

A sampler of excerpts from instructional and demo films produced by many of the graphics groups active in the early '70's in several universities and laboratories.

DAVID CLARK

Thursday
5:00-6:00 pm

University of London Audio Visual Centre
11 Bedford Square
London WC1B 3RA
United Kingdom

1. FLEXIPEDE

1972 1 minute; 16 mm movie film
By: Tony Pritchett at ATLAS Lab
Equipment: SD 4020

Fun. An early example of computer animation.

2. THE PRISM SHOWREEL

1976-1979 4 minutes; 3/4-inch videotape
By: Peter Chandler, Tony Diment, and Hayden Young at Imperial
College, London; EMI Central Research Labs, Hayes; and
EMI A/V.
Equipment: PDP 11/40

Selected title sequences and commercials.

3. THE ANTICS SHOWREEL

1975-1978 5 minutes; 16 mm movie film
By: Alan Kitching and Colin Emmett at ATLAS Labs
Equipment: FR80

Demonstration of the ANTICS software.

4. CELL DIVISION IN THE CARTILAGE PLATE DURING BONE GROWTH

1977 7 minutes; 16 mm movie film
By: Dr. N. Kembler at ULAVC
Equipment: CDC 6400; CALCOMP 1670

St. Bartholomew's Hospital. Animation of mathematical model of bone growth.

5. THE INTERACTION OF D⁺ + HD

1977 7 minutes; 16 mm movie film
By: Dr. K. Birkinshaw at ULAVC
Equipment: CDC 6400; CALCOMP 1670

University College, London. Ab initio trajectory calculations of molecular collisions. Note the contouring by eye.

6. FINITE ELEMENTS

1977 10 minutes; 16 mm movie film
By: Alan Kitching and Colin Emmett at ATLAS Lab
Equipment: SD 4020/ANTICS

Royal College of Art. A full length animation.

7. TAYLOR POLYNOMIALS

1977 3 minutes; 16 mm movie film
By: John Gilbert and John Richmond at ULCC/BBC
Equipment: CDC 6400; CALCOMP 1670; DIMFILM

Open University Mathematics Dept. An excerpt to show combination of computer animation with live action.

8. CHEMICAL CONFORMATION

1978 3 minutes
By: Tony Pritchett, Peter Chandler and Barry Whatley at ATLAS
Lab/BBC and EMI/BBC

Open University Chemistry Dept.

9. DRIVING THROUGH A JUNCTION

1978 1 minute; 16 mm movie film
By: G. Lupton at CAD Centre
Equipment: Bugstore/16 mm film

Transport and road research lab.

10. THAMES TV TITLE SEQUENCE

1979 1 minute; 16 mm movie film
By: T. Pritchett at ATLAS Lab
Equipment: FR80/35 mm

11. THE ALIEN

1979 2 minutes
By: J. Landsdowne, System Simulation at the CAD Centre, ATLAS Lab
Equipment: FR80/35 mm

For 20th Century Fox.

12. THE STRUCTURE AND FUNCTION OF HAEMOGLOBIN

1979 5 minutes; 16 mm movie film
By: Dr. D. Clark at ULAVC
Equipment: CDC 7600; CALCOMP 1670

University College Hospital Medical School. 3-d anaglyph.

JANE VEEDER

Thursday
6:00-7:00 p.m.

Electronic Visualization Center
1839 S. Halsted
Chicago, IL 60608

1. WIRE TREES WITH 4 VECTORS

1978 4 minutes; 3/4 inch video; stereo sound
Audio by: Lief Brush, Stu Pettigrew
Video by: Phil Morton, Guenther Tetz
Black and white performance computer graphics with
audio synthesis.
Equipment: UICC GRASS System, Chicago
Sandin Image Processor
Arp Audio Synthesizer

2. PROGRAM #9: AMATEUR TV

1979 29 minutes; 3/4 inch video; stereo sound
By: Phil Morton, Jane Veeder
Using digital home computer, analog signal processing, and
light-weight video equipment to produce a subjective
research report on amateur television (2,000-plus U.S.
Ham TVers transmitting/receiving personal television from
their home bases).
Equipment: Bally Arcade (Home Computer)
Sandin Image Processor

3. REFERENCE CARRIER

1978 2 minutes; 3/4 inch video; silent
By: Phil Morton
A dynamic black and white analog computer reference signal
to be filled in and colored by the user.
Equipment: Sandin Image Processor

4. LOOP CYCLE

1978 2 minutes; 3/4 inch video; stereo sound
Audio by: Phil Morton, Jane Veeder
Video by: Jane Veeder
Nested electronic multiplication and streaming.
Equipment: Sandin Image Processor

5. CETACEAN

1978 3 minutes; 3/4 inch video; stereo sound
Audio by: Chip Dodsworth, Barry Bosch
Video by: Chip Dodsworth, Phil Morton
Geographic field collection at Santa Cruz, California
and electronic field reprocessing at Chicago, Illinois
OCEAN
Equipment: Portable Video Teck
 Sandin Image Processor

6. ICRON

1978 11 minutes; 3/4 inch video; stereo sound
By: Bob Snyder
Multiple visual and audio instrument (simultaneous)
configuration running on master analog program.
Equipment: EMU Audio Synthesizer
 Sandin Image Processor

7. DATA BURSTS: THIRD MOVE+

1978 3 minutes; 3/4 inch video; stereo sound
Audio by: Phil Morton, Bob Snyder
Video by: Phil Morton, Buenther Tetz
Color performance computer graphics with audio synthesis.
Equipment: UICC GRASS System
 Sandin Image Processor
 EMU Audio Synthesizer

DAN SANDIN

Thursday
7:00-8:00 P.M.

School of Art & Design
University of Illinois at Chicago Circle
Box 4348, Chicago, IL 60680

1. THREE VIEWS OF WATER

1975 6 minutes (excerpt); 3/4" videotape color
By: Dan Sandin
Analog Image Processing of Naturally Collected Material
Equipment: Sandin Analog Image Processor

2. VAPOR TRAILS

1979 5 minutes (excerpt); 3/4" videotape color
By: Stuart Pettigrew
Direct Video Synthesis
Equipment: Analog Image Processor

3. NCC/GRASS POOP TAPE

1976 15 minutes; 3/4" videotape color
By: Dan Sandin, Tom DeFanti, Phil Morton
Circle Graphics Habitat GRASS System/Image Processor Demonstration
Equipment: Vector General and Image Processor

4. FIRST TAPE FROM THE DIGITAL IMAGE COLORIZER

1979 10 minutes; 3/4" videotape color
By: Dan Sandin
The First Card of the Digital Image Processor in its First
Public Showing
Equipment: Sandin Digital Image Colorizer

5. CHEMISTRY TAPES (EXCERPTS)

1973-77 5 minutes; 3/4" videotape color
By: Circle Graphics Inhabitants
Sample Tape of Rotating Molecules, etc.
Equipment: Vector General and Sandin Image Processor

6. SPIRAL 3

1978 10 minutes; 3/4" videotape color
By: Tom DeFanti, Phil Morton, Dan Sandin, Bob Snyder,
Jane Veeder and Rylin Harris (dance)
Performance Piece with Digital and Analog Computer Graphics
and Dance
Equipment: Vector General and Sandin Image Processor

PATSY SCALA

Friday
11:00-12:00 am

Syracuse Cable Systems
500 S. Salina Street
Syracuse, NY 13202

1. WIPEPOEM

1976 6 minutes; 3/4-inch videotape
By: Patsy Scala at Syracuse University
Equipment: DEC 10, Grass Valley television switcher,
 refracted laser light

Abstract attempts to sensualize computer imagery through use of color, movement, and the interplay of negative and positive space.

2. SCOPE II

1976 5 minutes; 3/4-inch videotape
By: Patsy Scala at Syracuse University
Equipment: DEC 10, Grass Valley television switcher,
 refracted laser light

Abstract attempts to sensualize computer imagery through use of color, movement, and the interplay of negative and positive space.

3. SYRACUSE CABLE SYSTEMS-COMPUTER VIDEO MUSIC CHANNEL

1979 30 minutes; 3/4-inch videotape
By: Programming Department Staff at Syracuse Cable Systems
Equipment: Apple II

Part of a 24 hour-a-day computer graphics cable channel, possibly the first of its kind in this country.

STAN VAN DER BEEK

6. VIDEO-SPACE

1971 7 minutes; 16 mm movie film
By: Stan Van Der Beek at WGBH, Boston
Equipment: Home-made oscilloscope modifications

An experiment with live dancers, computer graphics and videography. Made as a visual accompaniment to Ravel for the Boston Symphony Orchestra.

7. COLLIDEOSCOPE

1966 4 minutes; 16 mm movie film
By: Stan Van Der Beek, Ken Knowlton, and Carol Bosche at
Bell Laboratories, Murray Hill, NJ
Equipment: Stromberg Carlson 4020

Experiments with text and typography. A short poem is transformed into a series of patterns and optical illusions.

8. SYMMETRIKS

1972 7 minutes; 16 mm movie film
By: Stan Van Der Beek and Wade Shaw
Equipment: Light pen

Drawings that are multi-copied by the computer. An experiment to make color from a black and white film.

9. EUCLIDEAN ILLUSIONS

1979 11 minutes; 16 mm movie film
By: Stan Van Der Beek and Richard Weinberg at NASA, Houston, Texas

Geometric shapes penetrate each other and move through space. An unexpected moment in geometric order.

NELSON L. MAX

Friday
1:00-2:00 pm

L-73
Lawrence Livermore Laboratory
Box 808
Livermore, CA 94550

1. SPACE FILLING CURVES

1972 25 minutes; 16 mm movie film
By: Topology Films Project - Nelson L. Max, director.
Supported by the National Science Foundation at the
Education Development Center
Equipment: Stromberg DatagraphiX 4060 Microfilm Recorder

Describes the construction of limit curves from sequences of approximation polygons. Presents the snowflake curve, which has infinite length, and two different curves, invented by Peano and Sierpinski, which pass through every point in a square.

2. TURNING A SPHERE INSIDE OUT

1976 23 minutes; 16 mm movie film
By: Topology Films Project - Nelson L. Max, director.
Supported by the National Science Foundation at the
Education Development Center
Equipment: Three Rivers Graphics Display Processor
Evans and Surtherland Case Shaded Graphics System

Illustrates an eversion of the sphere: a smooth motion which turns the sphere inside out by passing the surface through itself without making any holes or creases. Computer animation, preceded by mathematicians discussing the problem, and a tour of the chicken-wire models upon which the animation is based are presented.

3. LIMIT SURFACES AND SPACE FILLING CURVES

1978 10-1/2 minutes; 16 mm movie film
By: Topology Films Project, P. O. Box 808, Livermore, CA 94550
at Case Western Reserve University
Equipment: Stromberg DatagraphiX 4060 Microfilm Recorder
Evans and Sutherland Case Shaded Graphics System

Presents four examples of infinite constructions. The first two are self-similar surfaces in three dimensions: a volume filling a surface and the Alexander horned sphere. The next two are Sierpinski's space-filling curve drawn as if traced by a moving point and then modified to make it one to one.